

Listing of Claims:

1-35. Cancelled.

36. (currently amended) A system for ablating an interior tissue region of an organ or duct within a body of a patient comprising:

an ablation tool including an elongated antenna device electrically coupled to a coaxial transmission line that is electrically coupled to a source of microwave energy, the coaxial transmission line delivering microwave energy to the antenna device so as ~~device having an elongated shaft having a proximal end, a distal end, and an elongated energy delivery portion proximate the distal end of the shaft which is configured~~ to effect ablation of a tissue region within the interior of the organ or duct, the coaxial transmission line including an inner conductor, an outer conductor and a dielectric medium disposed between the inner and outer conductors, the antenna device including an antenna that is coupled to a distal end of the inner conductor of the coaxial transmission line and an enclosure that encapsulates the antenna with a dielectric material; and

an introducer configured to carry at least a portion of the ablation tool, the introducer having a proximal end, a sharpened distal end for penetrating through a wall of the organ or duct, and at least one lumen which is sized and dimensioned for slidable receipt of at least the ~~energy delivery portion antenna device of the ablation device tool~~ therethrough, the antenna device being configured to be deployed into the interior of the organ or duct through the sharpened distal end of the introducer, wherein upon deployment the antenna device assumes a predetermined position in a direction towards the tissue region targeted for ablation and substantially parallel to the tissue region targeted for ablation

37. (currently amended) The system of claim 36 wherein said ablation ~~device~~ tool comprises a steering mechanism associated with the proximal end of the ~~device~~ tool which, upon manipulation, is configured to cause at least a portion of the ~~energy delivery portion antenna device~~ to assume an angular orientation relative to a longitudinal axis of the ~~shaft of the device~~ tool.

38. (currently amended) The system of claim 37 wherein said angular orientation is between about 0 and 90 degrees relative to the longitudinal axis of the ~~shaft~~ tool.

a1 39. (currently amended) The system of claim 37 wherein said angular orientation is between about 45 and 135 degrees relative to the longitudinal axis of the ~~shaft~~ tool.

40. Cancelled

41. (currently amended) The system of claim 36 wherein said ~~energy delivery portion~~ antenna device is preshaped to extend at an angle relative to a longitudinal axis of the shaft of the device.

42. (currently amended) The system of claim 41 wherein said ~~energy delivery portion~~ antenna device extends at an angle of between about 0 and 90 degrees relative to the longitudinal axis of the shaft.

a2 43. (currently amended) The system of claim 41 wherein said ~~energy delivery portion~~ antenna device extends at an angle of between about 45 and 135 degrees relative to the longitudinal axis of the shaft.

44. (currently amended) The system of claim 36 wherein said ~~energy delivery portion~~ antenna device includes a biasing element which is configured to bias the ~~energy delivery portion~~ antenna device into a preshaped angular orientation relative to a longitudinal axis of the tool ~~shaft of the ablation device~~.

45. (original) The system of claim 44 wherein said biasing element comprises a nitinol wire.

46. (original) The system of claim 36 wherein said organ or duct comprises a beating heart.

47. Cancelled.

48-50. (withdrawn)

51. (original) The system of claim 36 wherein an outer diameter of the shaft is less than about 3 mm.

52. (withdrawn)

a3 53. (currently amended) The system of claim 36 wherein said ~~energy delivery portion antenna device~~ is configured to be positioned at least a short distance away from a tissue region to be ablated within an interior of the organ or duct of the body.

54-56. (withdrawn)

57. (currently amended) A microwave ablation device for ablating an interior portion of a wall of a beating heart, the microwave ablation device effecting ablation of an interior tissue region within an organ or duct within a body of a patient comprising

~~an elongated shaft~~ a probe configured to penetrate the wall of the beating heart, the probe having a proximal end portion and a distal end portion having a sharpened distal end; and

a4 a microwave energy delivery portion carried within the probe and located proximate to the distal end portion of the shaft probe, wherein said sharpened distal end of said probe being is configured to penetrate a the wall of the organ or duct beating heart to facilitate placement of the microwave energy delivery portion within an interior cavity of the organ or duct beating heart, the microwave energy portion being configured to be deployed from the probe when placed within the interior cavity of the beating heart, the microwave energy portion also being configured the match the shape of the interior portion of the wall and to linearly ablate the interior portion of the wall of the beating heart when deployed within the interior cavity of the beating heart.

58-65. (withdrawn)

a5 66. (currently amended) The device of claim 57 wherein said microwave energy delivery portion is configured to be positioned at least a short distance away from a tissue region to be ablated within the interior of the organ or duct.

67. (currently amended) The device of claim 57 wherein said microwave energy delivery portion is configured to be positioned in contact with a tissue region to be ablated within the interior of the organ or duct.

68-75. (withdrawn)

76. (currently amended) A microwave ablation device for effecting ablation of an interior tissue region within an organ or duct within a body of a patient, comprising

an elongated ~~shaft probe~~ having a lumen that spans a proximal access end portion, a and an opposite distal penetration end of the elongated probe, the distal penetration end being adapted to penetrate a wall of the organ or duct ~~portion having a sharpened distal end;~~ and

a microwave energy delivery means carried by the lumen of the elongated probe and including an antenna device and a coaxial transmission line, located proximate to the distal end portion of the shaft for effecting ablation of tissue within the interior of the organ or duct the coaxial transmission line including an inner conductor, an outer conductor and a first dielectric medium disposed between the inner and outer conductors, the antenna device including an antenna that is encapsulated by a second dielectric medium and that is coupled to the inner conductor of the coaxial transmission line, wherein said sharpened distal penetration end is being configured to penetrate a wall of the organ or duct to facilitate placement of the microwave energy delivery means antenna device within the interior of the organ or duct, the antenna device and a portion of the outer conductor of the coaxial transmission line being deployed beyond the distal penetration end of the elongated shaft when the distal penetration end of the elongated shaft is positioned within the organ or duct.

77. (withdrawn)

78. (currently amended) An ablation device comprising:

an elongated shaft having a proximal end portion, a distal end portion, and a pre-shaped elongated energy delivery portion located proximate to the distal end portion which is configured to be positioned adjacent to or in contact with a tissue surface of an organ or duct to effect ablation thereof, wherein said energy delivery portion is formed from a shape memory material that substantially conforms to an inner wall of a heart when positioned through a penetration in a wall of the heart.

79. (original) The device of claim 78 wherein said shape memory material comprises Nitinol.

80. (original) The device of claim 78 wherein the energy delivery portion further

comprises a conductive layer overlying the shape memory material.

81. (original) The device of claim 80 wherein said conductive layer comprises silver plating.

82. (original) The device of claim 78 wherein said elongated energy delivery portion is pre-shaped to extend at an angle relative to a longitudinal axis of the shaft.

83. (original) The device of claim 82 wherein said energy delivery portion extends at an angle of between about 0 and 90 degrees relative to the longitudinal axis of the shaft.

84. (original) The device of claim 82 wherein energy delivery portion extends at an angle of between about 45 and 135 degrees relative to the longitudinal axis of the shaft.

85. (original) The device of claim 78 further comprising an introducer having a proximal end portion, a distal end portion having a sharpened distal end, and at least one lumen which is sized and dimensioned for slidable receipt of the ablation device therethrough.

86. (original) The device of claim 78 wherein the energy delivery portion comprises a microwave antenna.

87. (withdrawn)

88. Cancelled.

89. (currently amended) The device of claim ~~88~~ 78 wherein the energy delivery portion is configured to substantially conform to a tissue region surrounding a pulmonary vein.

a⁸
90. (currently amended) The device of claim ~~88~~ 78 wherein the energy delivery portion is configured to substantially conform to at least a portion of a lateral wall of the right atrium to treat typical or atypical atrial flutter.

91. (original) The device of claim 78 wherein the energy delivery portion is configured to be coupled to a source of microwave energy.

102. (new) An ablation assembly, comprising:

a probe for introducing a longitudinal energy delivery member into a cavity of an organ, the longitudinal energy delivery member being deployed within the cavity of the organ via the probe when the probe has percutaneously penetrated through a wall of the organ, the longitudinal energy delivery member being configured to conform to an inner wall of the organ when deployed inside the cavity of the organ so as to produce a substantially linear lesion on the inner wall of the organ when energy is delivered to the longitudinal energy delivery member.

09 103. (new) The ablation assembly as recited in claim 92 wherein when deployed the longitudinal energy delivery member assumes an angular position that places the longitudinal energy deliver member substantially parallel to the inner wall of the organ such that each longitudinal portion of the longitudinal energy deliver member is substantially equidistant from the inner wall of the organ.

104. (new) The ablation assembly as recited in claim 92 wherein the ablation assembly is a microwave ablation assembly, and wherein the longitudinal energy delivery member is a microwave antenna device including an antenna that is encapsulated by a dielectric medium.

105. (new) The ablation assembly as recited in claim 94 wherein the microwave antenna is electrically coupled to a coaxial transmission line that is electrically coupled to a microwave energy source.

106. (new) The ablation assembly as recited in claim 95 wherein the microwave antenna is directly or indirectly coupled to the coaxial transmission line.